



NAVAL SEA SYSTEMS COMMAND

# MK 45 MOD 4

NAVAL GUN SYSTEM

NAVAL SURFACE WARFARE CENTER, DAHLGREN DIVISION

PANAMA CITY DAHLGREN DAM NECK

## Overview

The U.S. Navy Program Office for Surface Combatants (PMS 529) has significantly improved the 5-inch (127-mm) lightweight dual-purpose gun. The Mark (MK) 45 MOD 4 is a fully automatic single-barrel gun mount that stows, handles, and fires ballistic and guided 5-inch projectiles. The gun mount loader drum contains ready-service auto-loader capacity for up to 20 conventional or 10 Extended Range Guided Munition (ERGM) rounds, or a mix of ERGM and conventional rounds. The MK 45 MOD 4 is the lightest, most accurate, and reliable 5-inch naval gun ever built. Ships equipped with the MK 45 have an effective weapon for antisurface warfare (ASuW), fire support, and antiair warfare (AAW) missions. In the new MOD 4 configuration, the MK 45 will deliver over-the-horizon range with a greatly improved system maintenance capability.

## MK 45 MOD 4 Dual-Purpose Gun Features

- 62-caliber gun barrel
- Increased range
- Strengthened trunnion support
- Guided munition initiation interface
- Ammunition identification capability
- Capacity to manage high-energy munitions to 18 megajoules
- Improved digital training and elevation systems
- Lower maintenance costs
- Increased efficiency from an improved operator-interactive display

## Offensive and Defensive Capabilities

The MK 45 MOD 4 gun can deliver the full range of 5-inch munitions at rates of fire up to 20 rounds per minute in support of forces ashore. In Land Attack fighting scenarios, the MK 45 MOD 4 gun will provide immediate response to calls for fire through integration with the Naval Surface Fire Support Fires Control System (NFCS). The MK 45 MOD 4 gun can apply fires in a counterfire role through integration with the AEGIS Weapon System or through digital interface with forces ashore.

The MK 45 MOD 4 gun can meet the entire threat from surface and air targets firing conventional rounds using the complete variety of fusing combinations (including Cargo Round munitions) and through operability with improved high-speed maneuvering surface target (HSMST) algorithms and other enhanced features in modern ship fire control systems.

## Program Plan and Schedule

The MK 45 MOD 4 gun will be installed in all Arleigh Burke-Class DDG-51 destroyers with hull numbers DDG 81 and above. Selected Ticonderoga-Class CG-47 ships will receive the MK 45 MOD 4 gun, and the capability exists to install this weapon in any ship presently configured with the MK 45 gun system.

## Manufacturer

The MK 45 MOD 4 gun is manufactured by United Defense, Minneapolis, Minnesota.



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